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states:(71) Applicant: **CANON INC**(72) Inventor: **KIMIZUKA JUNICHI  
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**(54) LIGHT QUANTITY  
CONTROL DEVICE**

(57) Abstract:

**PURPOSE:** To reduce an error at the control of the quantity of a laser beam by changing a laser current by one step and then comparing the quantity of detected light with the delay of a fixed time for converging a transient phenomenon.

**CONSTITUTION:** The quantity of a beam outputted from a laser 1 is detected by a detecting photodiode 8,

arithmetically amplified 13 and then A/D converted in a microprocessor MPU14, the digital signal is compared with a reference value selected out of plural reference values stored in a ROM 14-2 in accordance with light quantity switching signals S1WS3 and a signal corresponding to the reference value is outputted from the MPU14. The output signal is D/A converted 15 and supplied to a constant current circuit 20 through a current/voltage converting circuit 18 to control the driving current of the laser 1 through transistors 22, 25, 26, so that quantity of the laser beam is adjusted. If the values of output ports 01W09 of the MPU14 are changed by one bit, the current of the laser 1 is increased like steps, and after the passage of a waiting time for converging the transient variation of driving currents of the converter 15 and amplifiers 19, 21, the quantity of the laser beam is detected.

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